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**From:** Jacqueline van Engelen [jacqueline.van.engelen@rivm.nl]  
**Sent:** 3/9/2018 1:56:19 PM  
**To:** Guiseppi-Elie, Annette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=63d3e2eae9c4acba2609baa90b0f735-Guiseppi-El]  
**Subject:** RE: [Spam] RE: International review rubber granulate  
**Attachments:** 20180308 introductory text (including annex with summaries).docx; 20171106 introductory text (including annex with summaries)\_BfR.docx

Dear Annette,

Please find attached the full text (new version) and in a separate file the comments from the German reviewer on the previous version.  
I just finished the new dutch version and translated it myself (so there might be some slight changes when the translator looks at it).  
I will send all reviewers the final version, but I only wanted to check already with you beforehand.

Best regards, Jacqueline

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**From:** "Guiseppi-Elie, Annette" <Guiseppi-Elie.Annette@epa.gov>  
**To:** "Jacqueline.van.Engelen@rivm.nl" <Jacqueline.van.Engelen@rivm.nl>,  
**Date:** 07-03-2018 21:16  
**Subject:** RE: [Spam] RE: International review rubber granulate

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Dear Jacqueline,

Can you send the full text with both the general language and the specific from the German reviewer together? My concern would be making sure that the endorsement does not appear to be an EPA endorsement as well as having the risk for the situation that was evaluated.

I should be able to address tomorrow but by Friday.

Best Regards, Annette.

**From:** Jacqueline van Engelen [mailto:jacqueline.van.engelen@rivm.nl]  
**Sent:** Monday, March 05, 2018 9:35 AM  
**To:** Guiseppi-Elie, Annette <Guiseppi-Elie.Annette@epa.gov>  
**Subject:** Re: [Spam] RE: International review rubber granulate

Dear Annette,

## Ex. 5 Deliberative Process (DP)

# Ex. 5 Deliberative Process (DP)

Thank you in advance

Best regards, Jacqueline

From: "Guisseppi-Elie, Annette" <Guisseppi-Elie.Annette@epa.gov>  
To: "Jacqueline.van.Engelen@rivm.nl" <Jacqueline.van.Engelen@rivm.nl>,  
Date: 30-11-2017 06:07  
Subject: [Spam] RE: International review rubber granulate

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Dear Jacqueline,

I realize that you have your scientific meeting today and did not respond to your note.

# Ex. 5 Deliberative Process (DP)

# Ex. 5 Deliberative Process (DP)

Good Luck with the meeting.

Best Regards, Annette.

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Annette Guiseppi-Elie, Ph.D., FAIMBE  
*Associate Director for Exposure Science*  
NERL/ORD/USEPA  
Telephone: 919.541.4986; Mobile: 919.451.0621  
Email: [guiseppi-elie.annette@epa.gov](mailto:guiseppi-elie.annette@epa.gov)

**From:** Jacqueline van Engelen [<mailto:jacqueline.van.engelen@rivm.nl>]

**Sent:** Monday, November 06, 2017 6:44 AM

**To:** Guiseppi-Elie, Annette <[Guiseppi-Elie.Annette@epa.gov](mailto:Guiseppi-Elie.Annette@epa.gov)>

**Subject:** International review rubber granulate

Dear Annette,

Enclosed you find two documents:

- 1) The final draft of the introductory text that we want to publish on our website, together with the individual summaries of the reviewers
- 2) Our response to comments with regard to your review

1)

As mentioned before we will discuss the insights gained by this scientific review with the Scientific Advisory Board of RIVM. Furthermore we will publish the summaries of the individual reviewers accompanied with an introductory text on our website. The international review of the RIVM rubber granulate report will be scheduled at the meeting of our Scientific Advisory Board on November 30. Only after this meeting, the summaries and the introductory text will be published on our website.

In case the introductory text does not correctly reflect your reaction, please feel free to let us know.

2)

The response to comments document can be regarded as a documentation of the state of the art in our common understanding, differences in interpretation and possibilities for refinement of the risk assessment.

We treat your review as a confidential document. However, RIVM is a part of the State of the Netherlands, this means that we are a governing body. Dutch government information is always public, unless there are valid, legal reasons to withhold specific information. A request based on the Dutch Public Access to government information is referred to as a Wob request (freedom of information).

When RIVM receives a request to disclose your review based on the Dutch public access to government information act, this request will be handled by the Ministry of Health, Welfare and Sports. In this eventual situation, the Ministry of Health, Welfare and Sport will always notify the owner/sender of the document in writing of the underlying request and will ask for your view on the disclosure of the document. In case the review is disclosed, we will for reasons of completeness also disclose our Response to Comments document.

Once again thank you for all your efforts.

Hope to have you well informed,

Best regards,

Jacqueline van Engelen, PhD

Senior Toxicologist/risk assessor

Centre for Safety of Substances and Products  
National Institute for Public Health and the Environment (RIVM)  
Antonie van Leeuwenhoeklaan 9, 3721 MA  
PO Box 1, 3720 BA  
Bilthoven  
tel. 3130 2742919

e-mail [jacqueline.van.engelen@rivm.nl](mailto:jacqueline.van.engelen@rivm.nl)

From: "Guisseppi-Elie, Annette" <[Guisseppi-Elie.Annette@epa.gov](mailto:Guisseppi-Elie.Annette@epa.gov)>  
To: "[Jacqueline.van.Engelen@rivm.nl](mailto:Jacqueline.van.Engelen@rivm.nl)" <[Jacqueline.van.Engelen@rivm.nl](mailto:Jacqueline.van.Engelen@rivm.nl)>,  
Date: 27-08-2017 23:52  
Subject: RE: request for peer-review

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Dear Jacqueline,

First, thank you for the opportunity to review the report that is the result of the tremendous effort. The RIVM team is to be highly commended for their effort

Second, I apologize for the lateness of my feedback. It is a large document and wanted to provide a thorough review in order to give meaningful feedback (within my own time constraints).

Below is my summary of the overall assessment as well as an attachment with some more specific feedback. I have stamped the latter "Draft Deliberative" as these have not been shared with my management. It is ok to share both the summary and the attachment with the Scientific Advisory Board tomorrow with the caveat that these are not official EPA feedback.

**Review of the Report**

**"Evaluation of health risks of playing sports on synthetic turf pitches with rubber granulate  
Scientific background document"**

**National Institute for Public Health and the Environment, RIVM Report 2017-0017**

# **Ex. 5 Deliberative Process (DP)**

# Ex. 5 Deliberative Process (DP)

I will try to reach you by phone to get some additional guidance.

Thank you for your patience. Annette.

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Annette Guiseppi-Elie, Ph.D., FAIMBE  
Associate Director for Exposure Science  
NERL/ORD/USEPA

Telephone: 919.541.4986; Mobile: Ex. 6 Personal Privacy (PP)

Email: [guiseppi-elie.annette@epa.gov](mailto:guiseppi-elie.annette@epa.gov)

**From:** Jacqueline van Engelen [<mailto:jacqueline.van.engelen@rivm.nl>]

**Sent:** Tuesday, August 15, 2017 8:44 AM

**To:** Guiseppi-Elie, Annette <[Guiseppi-Elie.Annette@epa.gov](mailto:Guiseppi-Elie.Annette@epa.gov)>

**Subject:** RE: request for peer-review

Dear Annette,

Of course I do understand that you also have other priorities. And as said before I very much appreciate your cooperation.

I have to send a compilation of the results of from the reviews to our Scientific Advisory Board on Monday August 28, so when you are able to sent me your review on August 25, that will be just in time for me.

Best regards, Jacqueline van Engelen

Centre for Safety of Substances and Products

National Institute for Public Health and the Environment (RIVM)  
Antonie van Leeuwenhoeklaan 9, 3721 MA  
PO Box 1, 3720 BA  
Bilthoven  
tel. 3130 2742919

From: "Guisseppi-Elie, Annette" <Guisseppi-Elie.Annette@epa.gov>  
To: "Jacqueline.van.Engelen@rivm.nl" <Jacqueline.van.Engelen@rivm.nl>,  
Date: 14-08-2017 20:24  
Subject: RE: request for peer-review

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Dear Jacqueline,

I have run into some difficulty completing the review by this Friday. We are in the midst of getting the next phase of the field study going and with other commitments, I am not able to complete and provide written comments by this Friday August 18, 2017.

If at all possible, I would like to extend to next Friday August 25, 2017. Thank you.

With sincere regrets for any inconvenience.

Best Regards, Annette.

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Annette Guisseppi-Elie, Ph.D., FAIMBE  
Associate Director for Exposure Science  
NERL/ORD/USEPA  
Telephone: 919.541.4986; Mobile Ex. 6 Personal Privacy (PP)  
Email: [guisseppi-elie.annette@epa.gov](mailto:guisseppi-elie.annette@epa.gov)

**From:** Jacqueline van Engelen [<mailto:jacqueline.van.engelen@rivm.nl>]  
**Sent:** Wednesday, June 28, 2017 3:32 AM  
**To:** Guisseppi-Elie, Annette <Guisseppi-Elie.Annette@epa.gov>  
**Subject:** Fw: request for peer-review

Dear Dr Guisseppi-Elie,

I was contacted by the other two reviewers.

They both are not able to perform their review before August 1, so they will deliver their assessment on/before August 18.

So please feel free to also use this deadline when more convenient for you,

Best regards,  
Jacqueline van Engelen

Centre for Safety of Substances and Products  
National Institute for Public Health and the Environment (RIVM)  
Antonie van Leeuwenhoeklaan 9, 3721 MA  
PO Box 1, 3720 BA  
Bilthoven  
tel. 3130 2742919

----- Forwarded by Jacqueline van Engelen/RIVM/NL on 28-06-2017 09:29 -----

From: Jacqueline van Engelen/RIVM/NL  
To: "Guisseppi-Elie, Annette" <[Guisseppi-Elie.Annette@epa.gov](mailto:Guisseppi-Elie.Annette@epa.gov)>,  
Cc: Els van Schie/RIVM/NL@RIVM  
Date: 16-06-2017 12:23  
Subject: request for peer-review

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RIVM published its report on the health effects of rubber granulate on the RIVM website in December 2016, including the scientific reference documents. A scientific sounding board group provided feedback on the scientific quality of the report, the approach taken and its conclusions. The scientific sounding board group consisted exclusively of Dutch experts (their names can be found on page 41 of the report).

The English translation of the report and the scientific reference documents was completed in April 2017 and posted on the RIVM website; now that the translation is available, the RIVM Scientific Advisory Board has requested that the report be subjected to an international peer review.

To that end, we now issue an invitation to 3 experts, at ECHA, BfR and the US EPA, based on the consideration that these three regulatory authorities have in-house expertise relevant to this dossier. Your feedback is much appreciated; we sincerely hope you will be willing to lend us your assistance in this matter and provide a peer review of the report along the lines indicated below.

**Background: Reason for the study and the report:**

On 7 October 2016, the National Institute for Public Health and the Environment (RIVM) received a letter from the Minister of Health, Welfare and Sport stating the following:

"I understand the concerns in response to the broadcast and the questions that are now being asked. They prompted me to engage in immediate consultation with RIVM. Following the consultation, I took the precaution of asking RIVM to conduct extra research as a matter of urgent priority. This involves researching technical literature, in which the research results of all relevant references will be evaluated. The findings will be combined with a representative study on the concentrations of PAHs and other substances in the granulate that may affect the health of players. To that end, 50 to 100 sports pitches will be actively sampled. In the course of this study, RIVM will consult with the Scottish experts who spoke during the broadcast and contact Belgian colleagues who have announced they will also be researching rubber granulate. I have also asked the Risk Assessment Bureau of the



Netherlands Food and Consumer Product Authority (NVWA) (BuRO) to play a role in this study. I expect to notify the House of Representatives and the public about the results of this study before the end of the year. Decisions regarding any further measures will be taken depending on the results of the study.”

In the RIVM report the following questions were addressed:

1. Which hazardous substances are present in rubber granulate and at what levels?
2. To what extent can people playing sports on synthetic turf pitches be exposed to these substances and what are the resulting health risks?
3. What is known about the relationship between playing sports on synthetic turf with rubber granulate and leukaemia and lymphoma?
4. How do the concentrations of substances found relate to regulatory and other limits?

In light of the limited time frame available for the study, RIVM opted to take samples from 100 pitches, draft conservative exposure scenarios, and compare the exposure estimates to toxicological thresholds for the relevant substances.

#### **Request for the peer review:**

We would like to ask you to take part in a peer review about the RIVM report on rubber granulate (<http://www.rivm.nl/bibliotheek/rapporten/2017-0017.pdf>, see also attachment).

The peer review should focus on assessment of:

- the quality of the approach taken, also in light of and taking into account the brief time frame and the high societal pressure,
- the scientific quality of the report, and
- the validity of the main conclusion that “the health risk of playing sports on synthetic turf pitches with an infill of rubber granulate is virtually negligible”

The information provided in relation to the above will remain confidential and will only be shared with the Scientific Advisory Board.

In addition, we would like to release a summary of your assessment based on the following information to the public via the RIVM website:

- An overall assessment of the scientific quality of the report and the approach chosen: very good/good/acceptable/insufficient
- A summary of your assessment including and explanation for your overall assessment.

Because of this we would also like you to give your consent to the public release of this information on the website of the National Institute for Public Health and the Environment (RIVM). Please indicate in your response whether you agree or not with the public release.

We would appreciate to receive your assessment before August 1st. If this time frame is not feasible for you, please let me know.

Thank you very much in advance

Best regards,

On behalf of  
Els van Schie, PhD  
Director Environment and Safety, RIVM

Jacqueline van Engelen, PhD  
Senior Toxicologist/risk assessor

Centre for Safety of Substances and Products  
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[www.rivm.nl/en](http://www.rivm.nl/en) *Committed to health and sustainability* [attachment "20171106 introductory text (including annex with summaries).docx" deleted by Jacqueline van Engelen/RIVM/NL]

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